

### **Abstract of the Disclosure**

A shaped metal fixed-bed catalyst is disclosed which is made from at least one catalyst alloy formed of a catalyst metal and an extractable alloying component. The catalyst is activated in an outer layer with a thickness of 0.1 to 2.0 mm, starting from the surface, by complete or partial extraction of the extractable alloying component. The catalyst may also contain promoters. The catalyst is distinguished from known catalysts in that it is formed exclusively of the catalyst alloy and is free of alpha-aluminum oxide, and has a total pore volume of 0.1 to 0.6 ml/g and a bulk density lower than 2.2 kg/l.. The catalyst is used for hydrogenation, dehydrogenation and hydrogenolysis reactions.